

## ESSP-3 Announcement of Opportunity Questions and Answers

Below are answers to questions from proposal teams involved in the ESSP-3 Competition for NASA AO-01-OES-01.

Answers may be updated or modified.

Updated answers will be designated “AU” and will follow original answer.

Modified answers will be designated “AM” signifying the original answer has been reworded.

### ESSP Pre-Proposal Conference Questions

June 14, 2001

#### 1) Mission Confirmation Review

**Q:** Can objective criteria be provided to the teams **now** regarding the downselect at Step 3? (Mission Confirmation) How will the "proposed" missions be evaluated against each other? Obviously we know that NPG 7120.5 guides the usual mission confirmation but provides an absolute standard. If this standard is met, the mission will be confirmed. In case of ESSP-AO3, the absolute standards **can** be met, by each mission independently, **and** yet some missions will be terminated. What will be used to decide termination at **mission confirmation**?

**A:** For objective criteria on the confirmation review, see the Earth Explorers Mission Assurance Guidelines and Requirements (ESSP-3 AO Appendix H). The Mission Design Review will assess the projects' ability to meet mission success criteria of cost, schedule and performance. The ESE AA will decide, based on the briefing of findings by the executive committee, which project teams will proceed to Confirmation Review. The AA's decision will be based upon the science value, the feasibility to implement the mission successfully (Level One) and the funding priorities of the ESE. Upon selection to proceed by the AA ESE, the project will hold a Mission Confirmation Review with the Goddard PMC. The criteria to be confirmed is strictly the recommendation of the Goddard PMC, based on the project's ability to achieve mission success. Should a mission not be selected for confirmation, it is not considered termination, and the PI can repropose later.

#### 2) Step-Two Evaluation Process

**Q:** Will there be a full science evaluation in Step 2 or just evaluation of changes?

**A:** **Step Two will include a full evaluation of the science/applications.**

3) AO Technical Requirements

**Q:** Is debris assessment required for Step One?

**A:** **Debris Assessment is not required for Step One. General information on Orbital debris will be derived from spacecraft size and general orbit information. (Phil Napala)**

4) AO Cost Requirements

**Q:** The available funding for formulation is inconsistent with the requirements to reach PDR/MDR. NIAT has emphasized the importance of an adequate formulation process, and GSFC PMC expects this. Is ESSP willing to accept a "PDR-lite" and push traditional preliminary data into the implementation phase?

**A:** **No. PI's should propose the necessary funding for the task and schedule proposed. A "PDR-lite" and delaying formulation activities for implementation phase are not acceptable. We are in the process of reevaluating the funding profiles for this effort.**

5) Miscellaneous

**Q:** I'm interested in teaming. Is there a plan to publish the attendees of this preproposal conference? The "ESSP Teaming Interest" site only contains a subset of contractors. How can I find out who the major (prime) contractors are likely to be?

**A:** **The attendees list from the Pre-Proposal conference will be listed on the ESSP AO website at [http://centauri.larc.nasa.gov/essp/ESSP\\_PPProp\\_Conf\\_Attend.pdf](http://centauri.larc.nasa.gov/essp/ESSP_PPProp_Conf_Attend.pdf) . For a list of major contractors, see the list of parties interested in teaming in the handout available today or on the ESSP AO website.**

6) Launch Services

**Q:** MO and DA budget must include reserved retrieval cost for ISS payload considerations. How do we estimate this?

**A:** **For payloads that fly on the International Space Station (ISS), the payload must support retrieval from orbit and return to the ground. The PI's MO and DA budget must include the support costs necessary for the PI and his/her team to perform the retrieval activities such as flight and ground safety reassessments, ground handling of the hardware upon return, developing any new procedures and deintegration and return of any ISS carrier hardware or other government-owned hardware to a government-designated facility. There is no charge to the PI for transportation of the ESSP payload back to Earth on the STS.**

7) Launch Services

**Q:** If we contract with a U.S. launch service that is not on NASA contract, must we still meet the NASA policies on launch services?

**A:** **Yes, the offeror must explain how they will meet the launch service policies whether it is a NASA-contracted or PI-contracted launch service.**

8) Development Time

**Q:** AO states that time from MCR through launch is 36 months. Statements in the PreProposal conference mentioned this timeframe was "nominal." Can a proposer offer a mission with less than 36 month development, or a mission with greater than 36 month development? Is there a limit to either an earlier or later end date?

**A:** **The AO calls for a nominal period of 36 months to achieve launch readiness. Final selections will not be made before June 2003. The funding profile for ESSP is based on flights using a NASA-provided ELV in 2006. IF the mission cost is low enough, then some flexibility may be allowed. Be sure to allow for storage and team retainage costs should your schedule be less than 36 months and your launch slips. If your schedule is longer than 36 months, make sure you have enough reserve(contingency) in your budget to cover a longer duration mission schedule. Your mission also has to fit within the ESSP-3 funding profile given at the conference and that may also effect your schedule.**

9) Miscellaneous

**Q:** For proposers not familiar with RSDO etc., this is way too late to find out about assessments. Also, new cost and evaluation info is difficult to incorporate this late. Two suggestions: 1) in the future hold conference within one week of AO release and 2) consider extending the due date for Step One so proposers can best meet your requirements. We want to give you good proposals and successful missions - help us be responsive!

**A:** **We cannot extend the deadline for the submission of the ESSP-3 Step One proposals. However, your suggestion will be taken into consideration for the next round.**

10) AO Cost Requirements

**Q:** Cost Table K-9 has a top section and a lower section (Development? and Ops?). Is the upper section exclusively for pre-launch and the lower section exclusively for post launch?

**A:** **No. The top section, "Mission Development," is intended for development activities. The bottom section, "Launch and Mission Operations," includes prelaunch and launch activities, as well as operations activities.**

11) Miscellaneous (similar to #9)

**Q:** By holding this conference within one month of proposal due date, much of the information provided, particularly cost, will be "challenging" to incorporate into the formal review processes at the home institutions. In the future, can you hold this conference within one week of AO release?

**A:** **Your suggestion will be taken into consideration for the next round.**

12) Miscellaneous

**Q:** Will the presentation charts from this pre-proposal conference be posted on the web ?

**A:** **Yes, all presentations are available at:**  
<http://centauri.larc.nasa.gov/essp/overcharts.html>

13) Miscellaneous

**Q:** How much time is there between mission confirmation review and mission implementation?

**A:** **Once a mission successfully completes mission confirmation, the implementation phase begins immediately.**

14) AO Management Requirements

**Q:** AO Section 3.7 states "use innovative approaches necessary to stay within the strict cost and schedule limits." How do we coordinate such streamlining with NASA for review and approval? Is there a penalty for recommending tailoring of the cost reporting and mission assurance guidelines called for in the AO?

**A:** **NASA NPG 7120.5 states that tailoring of project requirements is based on several factors. The PI should coordinate with the Earth Explorers Program Office and the EEP mission manager to assess and receive approval for tailoring of project requirements. Tailoring of financial requirements is negotiable with the EEP office. However, the intent of the AO must be upheld and shall not be compromised.**

15) AO Contributions

**Q:** Are US government contributions (other than NASA) counted within the \$125M cap? It is our understanding, for example, that services, infrastructure or products contributed/provided by a US government agency (not NASA) are part of total mission cost but not counted against the \$125M.

**A:** **Contributions by non-NASA US government agencies are part of the total mission life cycle cost (TMLCC), but are not included in the \$125M NASA ESE cost cap.**

16) AO Cost Contributions

**Q:** If my institution has previously developed parts of the proposed flight hardware

Using other US government funds, is that funding deducted from the \$125 M?

**A: Previously developed hardware and software are not deducted from the \$125M cost cap. The \$125M cost cap is for NASA ESE funding that begins with Step Two Selection.**

17) Miscellaneous

**Q:** Resumes are required for Step One. Are Step One resumes for science team and PI only? Are resumes for other key individuals such as PM and system engineer required for Step One? Optional for Step One?

**A: As stated in Appendix K, Section L (Appendices), resumes or curriculum vitae for all NAMED team members are required. Project manager must be named in Step Two.**

18) Step One Evaluation Criteria

**Q:** Will the 6-8 proposals rated "selected" or "encouraged" to proceed to submit Step Two be ranked, and will the rankings be made available to PI's?

**A: No, the proposals will not be ranked. The PI will receive an evaluation form from the Step-Two process which will discuss proposal 'strengths' and 'weaknesses'.**

19) Launch Services

**Q:** As a mission option, the AO states that the EXPRESS Pallet or WOLF may be utilized aboard the ISS. Is there a limit on the mission length if an EXPRESS pallet is chosen? Also, do NASA ESE funds cover the cost of launch services to the ISS

**A: The amount of time an instrument can be left on orbit depends on the amount of time required to obtain the proposed science/applications data and the priority of other missions waiting for flight. All proposers should assume that they will be allowed to remain on orbit as long as it is necessary to obtain the data but may be required to justify extended on orbit stays.**

**Yes, NASA ESE funds will cover the cost of launch services to the ISS. However, costs associated with using the launch services (i.e. support for payload integration to carriers, document preparation [ICDs, Safety Data Packages] & payload review travel costs) are not included and should be included in your proposed mission cost estimate.**

20) Launch Services

**Q:** In the ESSP AO in the '3.1.4 Launch Services' section, in the second paragraph on page 17 it says:

"Please note that although NASA will fund the Government launch services separately, NASA Earth Science Launch Services Cost will be considered and evaluated as part of the total NASA Mission Cost. All launch services shall be costed in the proposal whether funded by NASA or not."

However, at the Preproposal Conference it was said that there was no cost associated with using the Space Shuttle, which is the vehicle we were going to propose. Does this mean that in our proposal we should say there are no launch costs associated with putting an instrument on the EXPRESS Pallet since it is going to be launched by the Space Shuttle? Or do we have to come up with some estimate of launching an instrument on the Shuttle?

Any help and or guidance you could give would be greatly appreciated.

- A: While there is no cost for the Shuttle launch itself, there will be costs incurred in preparing your payload for a shuttle flight and supporting the integration of your payload to its carrier at KSC. This carrier is the EXPRESS Pallet for pallet payloads. WOLF payloads have several transportation options including shuttle lockers, spacehab, or the MPLM. In addition to considering your personnel at KSC during integration and costs for payload required non-standard services (reference the ISS document in the Program Library), the Research Program Office (RPO) at GSFC is preparing files that will help define the documents you need to supply and reviews you have to attend to launch a payload on the shuttle and operate it on the ISS. These documents do not necessarily contain all of the requirements necessary to launch a payload on the shuttle and fly on the ISS since the requirements are still evolving as the ISS is being built. They will, however, help you better understand what your mission will have to provide to NASA so you can budget the appropriate resources. These files are under review by JSC and will be posted on the RPO website (<http://rpo-iss.gsfc.nasa.gov/>). Support for payload retrieval and return flight on the shuttle at the end of the payload life will also need to be considered. *See A6 for more information on payload retrieval costs.***

## **Questions Submitted After Preproposal Conference**

### **21) Miscellaneous**

**Q:** At the pre-proposal conference, Claude Frenier encouraged proposers to submit Table K-6 to help NASA with parametric modeling of the mission. However, the page limits make it very difficult to find a suitable location to fit this large table, which is optional for STEP One. The proposers would like to assist NASA by providing this information to improve the accuracy of the cost-risk evaluation. Any suggestions on where to include the Table without impacting the page count?

**A:** **Any proposer who wishes to attach a Table K-6 to a Step One proposal may attach it as the last page of the proposal; it will not be counted in the page count limitations.**

22) **Miscellaneous**

**Q:** Do we REALLY have to have all of our Co-Is and science team members sign up with SYS-EFUS?

**A:** **Yes, all CoI's and science teams members should sign up with SYS-EYFUS. Team members don't all have to be identified by the NOI submittal date (June 22, 2001), but they should be identified by the Step-One proposal due date of July 20, 2001.**

23) **Miscellaneous**

**Q:** Some of the PIs are getting "funny error messages", when they submit the NOI on SYS-EYFUS.

**A:** **SYS-EYFUS has been having some technical problems, but they are working on it and it should be resolved. Keep trying and be patient when accessing the SYS-EYFUS system, it does work!**

24) **Miscellaneous**

**Q:** Could you verify at least the number of Goddard PI NOI's received so far?

**A:** **We are not permitted to tell you how many NOI's have been submitted from Goddard, but if you would like to submit to Dave Pierce a list of names of PI's that would like to confirm that their NOI's were received, we will be happy to send a confirmation receipt to the PI's so they know if their NOI was received.**

25) **AO Science/Applications Requirements**

**Q:** The mission design table K-5 calls for a number of items which may not be applicable to all proposed investigations (such as items referring to Parking Orbit). May those rows be omitted from the table to conserve space? Does this apply to all required tables?

**A:** **Please do not omit any rows. Simply type in N/A for not applicable.**

26) **AO Science/Applications Requirements**

**Q:** Table K-4 is required in section F and counts against the 12 page limit. To be of any real value this table may easily exceed a full page in length when properly filled out. Do you

expect to get the value/summary column to contain anything more than a simple phrase or numerical range for the Step 1 proposals?

**A: As stated in the AO, the table ask for values or summaries. The summaries can be as short or as long as PI needs to explain the requirement. It must fit within the page limit.**

**27) AO Science/Applications Requirements**

**Q:** Table K-4 calls for power, data rate, ... and these can reasonably be expected to fit in a table entry. Then at the very bottom of the table, it requests for this data again, but now broken down by operating mode. Is this level of detail a reasonable expectation for a step 1 proposal? If yes, can the detailed information, which would require a table unto itself be provided in an appendix in order to conserve space counting agaainst the 12-page limit?

**A: All table entries should be answered to the best of the PI's ability at the time the proposal is submitted. It is understood that these will be conceptional responses. The table is required within the 12-page limit.**

**28) AO Technical Requirements**

**Q:** Is it appropriate to include tables K-5(a) "Mission Design Table" and K-7 "Required Launch Service Table" if the proposed Mission will use the EXPRESS Pallet/ISS/Shuttle?

**A: Yes, it is appropriate and required. If a line is not applicable to your specific proposed mission, put "n/a" on it.**

**29) AO Technical Requirements**

**Q:** We have the information for several of the 'Step-Two' tables (specifically K-6 and K-8) but the page limit restricts us from adding these tables to the technical section. At the pre-proposal meeting a question was raised and I received the impression that if we had this information it would be best to provide it. Can we add these tables as an appendix to our proposal even though it is not listed in paragraph L of appendix K?

**A: Tables K-6 and K-8 can be added to the end of the proposal without being counted in the page count limitations**

**30) AO Science/Applications Requirements**

**Q:** Is there a maximum mission length for the EXPRESS Pallet option?



**A:** The mission length should be set as the time required to obtain the proposed science/applications. A PI should keep in mind that there may be other payloads who need the EXPRESS Pallet accommodations and the Earth Science Enterprise will have to make a judgement based on the Enterprise's priorities as to when a mission must end.

31) **AO Cost Requirements**

**Q:** We are proposing to place an instrument on an EXPRESS Pallet destined for the International Space Station. Our instrument sends data out at about 45 kbps (very low rate). Our understanding is that the data goes from the pallet to the Ku-band dish, to TDRSS, to White Sands and finally to Marshall where it will be sent out to the user. We are also putting together our budget and need to know if there is money that has to be allocated in our budget for costs at Marshall SFC for getting this data down and out to the user. Or is this covered by the ISS operations?

**A:** The data downlink from the ISS through the TDRSS, White Sands, etc., up to the MSFC is no charge. The MSFC also does not charge to send out the data to a customer with the exception that if a data circuit is required from the MSFC to the customer's site, then the customer must pay for the circuit. If there are existing data circuits from MSFC to a customer's site, then the customer may be able to negotiate a deal with the owner of those circuits.

**AU:** *The most efficient scenario is to connect to the science internet (Abilene). That connection is the responsibility of the PI. The point of contact at MSFC for more detailed discussions is Cathy Lapenta, 256-544-5785.*

32) **Electronic Version of Proposal**

**Q:** The instructions for the cover page in App. K, Para A, are quite different from the level of detail required in the SYS-EFUS forms. Is the SYS-EFUS cover page REQUIRED, or can we generate an Appendix-K compliant cover page and submit in hard copy and electronically?

**A:** Submittal of the Proposal cover page in the SYS-EYFUS Web site is optional, but a Proposal Cover Page is required to be attached to the hard copy of the proposal.

This matter is addressed in section 1.2.2 of the ESSP AO which states:

**1.2.2 Cover Page**

A proposal Cover Page is required as part of the proposal, but will not be counted against the page limit. The cover sheet must be signed by the Principal Investigator and an official, by title of the investigator's organization, who is authorized to commit the organization.

The proposal Cover Page **may** be submitted electronically to the SYS-EYFUS Web site located at <http://proposals.hq.nasa.gov/>. If the proposer has submitted an electronic NOI

to SYS-EYFUS, the same User ID and password can be used to complete the electronic proposal Cover Page. SYS-EYFUS will allow the user to copy the NOI information into the proposal cover page to update as necessary

32a) **Electronic Version of Proposal**

**Q:** If we must use the SYS-EFUS cover page, is there means to add additional year to the budget section? The current web page only has 5 years in it and there does not appear to be a means to add additional years.

**A:** The Proposal Cover Page template on the SYS-EYFUS web-site does only allow cost data for 5 years. During the compliance check, the NPRS staff will be checking the hard copies of the proposals (including cost data) against the web input. Cost data in any proposal received that exceeds a 5 year profile will be input manually into SYS-EYFUS by NPRS staff. Therefore, any proposal that has a cost profile exceeding 5 years should just input the cost for the first 5 years into the proposal cover page, and the NPRS staff can add any other data at proposal check-in.

33) **AO Science/Applications Requirements**

**Q:** Can we combine tables L-3 and L-4 into one?

**A:** No. Please provide tables as requested. We have different evaluators reviewing different sections of the proposals. If the tables are not provided in the requested section of the proposal the PI runs the risk of an evaluator not finding all the information needed to properly evaluate the proposal.

**New Questions since October 1, 2001:**

34) **Schedule**

**Q:** The ESSP3 Step 2 proposal submission deadline was originally January 11, 2002, but I heard it was moved to a later deadline. What is that new deadline date?

**A:** The deadline for ESSP-3 Step-Two proposals has been moved forward to February 4, 2002. Other ESSP-3 schedule dates have changed as well. Go to the "ESSP-3 Schedule" link on the ESSP-3 homepage to view the latest changes.

35) **Schedule**

**Q:** We see that the schedule has been changed. Is there a method that we can be automatically be notified of any changes to the ESSP A03? For instance, if the schedule changed or if new appendices were released then we would be automatically be notified.

**A:** Since ESSP-3 is still in the competitive process, the only way for proposers to keep informed of changes is through the ESSP-3 website. The ESSP-3 website ( <http://centauri.larc.nasa.gov/essp/> ), will be updated weekly. Most updates will be in the interactive Question and Answer site ( <http://gaia.hq.nasa.gov/essp3steptwo/> ), changes to the schedule and AO requirements will be noted in the Announcements

link ( <http://centauri.larc.nasa.gov/essp/announcements.html> ) on the ESSP-3 homepage.

36) **AO Technical Requirements**

**Q:** From the AO, page K-8:

*Letters of endorsement shall be signed by institutional and Government officials authorized to commit their organizations to participation in the proposed investigation and shall include the signature, full name, address with zip code, telephone and fax numbers, and electronic mail address. These letters shall describe the offered goods/services and their associated value/cost. The letters of endorsements shall be included in Section L of the proposal; the one page summary in Section E.*

*The institutions and/or governments involved shall endorse any participation by foreign individuals and/or institutions as team members or contributors to ESSP investigations. ...*

Does this last sentence mean that all participants' endorsement letters must (in their letter) also endorse any foreign participants that the mission uses?

**A:** **It simply means that the foreign institutions and/or foreign governments must state in a letter of endorsement that they are aware of the proposed participation of foreign individuals and/or institutions and they are prepared to support the proposed activities. This must be done to ensure that the foreign individuals and/or institutions have the funding they will need because they can not be funded with U.S. government funds (no exchange of funds).**

37) **Electronic Version of Proposal**

**Q:** The AO requires that the electronic version be in MSWord for Windows. We would very much like this constraint to be reconsidered, for the following reasons.

(1) MSWord is a very unstable tool. Symbols, Greek letters, and other characters are rendered in arbitrary and sometimes unreadable form, depending on the font set available on each machine.

(2) MSWord cannot manage figures in even a modest-sized document. They appear at random placement, move of their own accord, even overlapping text, tables, and other figures. Not acceptable.

(3) Color management is very poor.

(4) The legality of requiring a specific platform (PC, by implication) is questionable.

If Sponsor utility and faithful reproduction of the proposal are the objectives, we suggest the following. Accept PDF as the primary electronic format. These files are stable, and platform-independent. These files can be submitted on a CD, and should be accessible by anyone. If changes have to be inserted by the Sponsor or their agent, these can be done through Adobe Acrobat.

(If there remains a requirement for MSWord, then text-only files could be submitted in that format, although such text would still include character transcription errors beyond the control of either the author or the reader.)

The cost volume can be in Excel.

**A: The AO electronic media requirements will not be changed. The ESSP-3 Executive Committee understands that there are problems with MS-Word, however we try to pick software that proposal reviewers are most likely to have installed on their PCs. While you have to provide electronic copies of your proposal, the print version you provide takes precedence over any electronic version. If problems appear in the electronic version (i.e. figures moving, text and symbols changing), we will refer to the printed copy for clarification.**

**38) Launch Services**

**Q:** Considering the recent failure of a Taurus ELV, will the Athena II be approved for ESSP-3?

**A: No. NASA does not have a launch services contract for the Athena II vehicle.**

**39) Schedule**

**Q:** We request clarification regarding the ESSP mission schedule, and the dates of major milestones. Proposers need to understand these major milestone dates, since the detailed cost estimates required by the AO are highly dependent on them. We request this clarification as soon as possible so that the proposers can properly develop their detailed cost estimates. Specific questions and recommendations are as follows:

1) The "Announcement of STEP-Two Selections" date was slipped about 3 months from March 2002 (in the AO) to June 28, 2002. However, the PDR/MDR, Missions Selected to Proceed, Confirmation Readiness Review, and Mission Confirmation Review dates were not slipped from the dates in the AO. Is this intentional, or is a corresponding slip of those dates also being considered? If so, then when would we expect to hear new dates?

2) The date for "Announcement of STEP-Two Selections" is now stated as June 28, 2002. Each proposal must then make an assumption on when they can get on contract to start work. In order to compare all the proposals on an equal basis, it would be useful to pick a uniform "Nominal Project Start" date for all of them, even if that date turns out later to be incorrect. We recognize that the time to get on contract may vary for different institutions. However, we believe that picking a common start date would be preferable to allowing each proposer to make their own assumptions. It would be beneficial for planning purposes, and for equitable comparison. Therefore, we recommend that a Nominal Project Start date also be provided in the ESSP schedule.

**A: 1) The dates for the PDR/MDR, Missions Selected to Proceed, Confirmation Readiness Review, and Mission Confirmation Review are under review and will be**

**announced at the Step-Two Kickoff Meeting on 11/15/01. Schedule date changes will be posted on the ESSP website when available.**

**2) Selected teams can start anytime after the ESSP-3 Step-Two Selection Announcement date, June 28, 2001. However, there will be no NASA funds available until after the mission contract has been signed by all parties. The estimated time to get the contract in-place is 30-60 days after the selection date.**

40)